Scientific Inquiry
K-1 **The student will demonstrate an understanding of scientific inquiry, including the processes, skills, and mathematical thinking necessary to conduct a simple scientific investigation.**

K-1.4 Compare objects by using nonstandard units of measurement.
Taxonomy Level: 2.6-A   Understand Factual Knowledge

Previous/Future knowledge: As with other indicators at this grade level, students will experience their first formal introduction to important science skills and processes. The development of these skills and processes will serve as the basis for all future science investigations. In 1st grade (1-1.1), students will compare, classify, and sequence objects by number using standard English units of measurement where appropriate. In 2nd grade (2-1.2), students will use tools and begin gathering specific data in US customary (English) and metric units of measurement.

It is essential for students to know that objects can be compared using *nonstandard units* (measurements of a known quantity such as fingers, counting bears, paper clips).
- A *measurement* includes a number (counting) and the name of how it was measured (labeling), for example the desk is 3 hands long.
- The nonstandard unit chosen should be appropriate to the object being measured.

Making comparisons can help to better understand the properties that are observed.
- For example, terms such as "as many as," "more than," "the same as," or "as long as" can be used to compare measurements of different objects.
- When comparing objects, the nonstandard unit must be the same.

NOTE TO TEACHER: Students need to experience comparing and measuring objects through exploration. They should understand the process of comparing and measuring with non-standard units before they are introduced to standard units in first grade.

It is not essential for students to use English or metric units of measurement.

Assessment Guidelines:
The objective of this indicator is to *compare* objects by using nonstandard units of measurement; therefore, the primary focus of assessment should be to give similarities and differences between objects based on measurements using nonstandard units. However, appropriate assessments should also require students to *identify* an appropriate nonstandard unit for a measurement of an object.